APPENDIX

CLAIMS ON APPEAL:

1. A process for the continuous preparation of thermoplastic polyurethane elastomers in which

one or more polyisocyanates (A) and

a mixture (B), with Zerewitinoff-active hydrogen atoms, comprising

B1) 1 to 85 equivalent-%, with respect to the isocyanate groups in (A), of one or more compounds with on average at least 1.8 Zerewitinoff-active hydrogen atoms and an average molecular weight $\overline{M_n}$ of 450 to 10000,

B2) 15 to 99 equivalent-% (with respect to the isocyanate groups in (A)) of one or more chain lengthening agents with an average at least 1.8 Zerewitinoff-active hydrogen atoms and a molecular weight of 60 to 400, and

0-20 wt.%, with respect to the total amount of TPU, of further auxiliary agents and additives (C)

are homogeneously premixed in a reactor within a period of at most 5 seconds, wherein the difference between the temperatures of components (A) and (B), before entering the reactor, is <20°C.

2. A process according to Claim 1, in which the temperature of components (A) and (B) before entrance to the reactor is between 60°C and 220°C.

3. A process according to Claim 1, in which the reactor is a static mixer.

4. A process according to Claim 3, characterised in that the static mixer has a length to diameter ratio in the range from 8:1 to 16:1.

5. A process according to Claim 1, in which the reactor is a twin shaft extruder.

7. Thermoplastic polyurethane elastomers prepared according to the process in accordance with Claim 1.

9. The process of Claim 1 wherein the reactor is a member selected from the group consisting of extruder and tubular reactor.